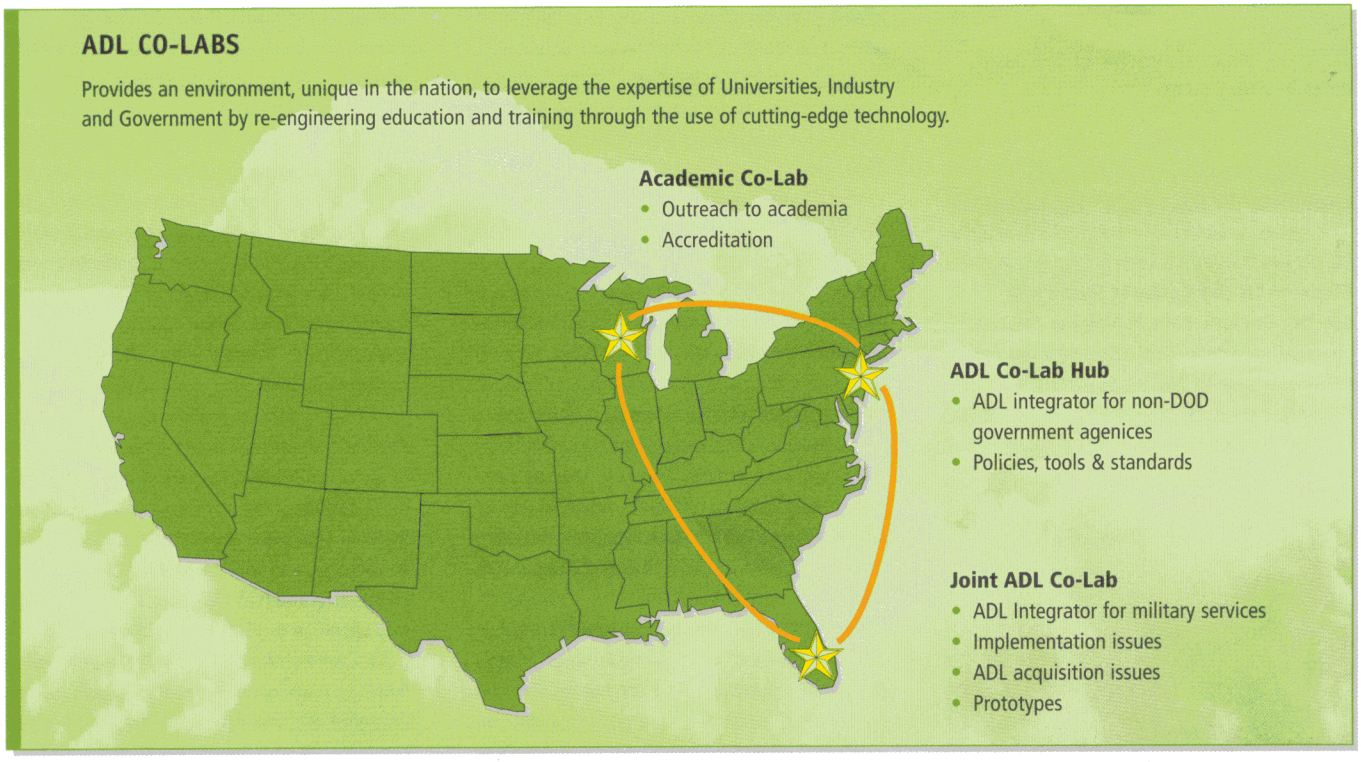
Orlando ADL Co-Labs
Guides US Military Adoption of ADL

The Joint ADL Co-Lab, in Orlando, Florida is one of the key mechanisms enabling the US armed forces to develop advanced distributed learning (ADL) systems and courseware, supporting their goal of "training anytime, anywhere", a part of "training transformation".
Chuck Weirauch explains.

"We are the part of the US ADL Initiative responsible for military implementation of ADL," said Joint Co-Lab Director Dr. Kristy Murray. "Our office is involved in taking the policies, standards and specifications developed by the ADL Co-Lab in Alexandria, Virginia and directing them towards the military services. We then provide feedback



Above
The Joint Orlando ADL Co-Lab represents the US military in the US ADL Co-Lab network.
Image credit: ADL

Top
Dr. Kristy Murray, director of the Joint Orlando ADL Co-Lab.

Above
The Virtual Soldier is a prototype simulation for use in ADL courseware.

Below
Students in the National Guard Electronic Classroom in Orlando discuss their ADL course. The classroom is one of nearly 250 in the nationwide GuardNet system.
All image credits: ADL

from the services back to the Alexandria, Virginia Co-Lab so that they can evolve the standards and specifications. You could call us the middlemen between the actual operational units in the military and the policy folks in Washington. I personally really like this position, because I believe that this is where the action is and where you actually see something turning into reality."

Murray feels that being a part of the effort to turn ADL into something that will benefit the military is exciting because the services really need a mobile learning system, she said. This system involves the ability to download training and educational courseware to an electronic device so that armed forces personnel can deploy to the field or the ship, do their training, and take their take their tests while away from a schoolhouse environment, she explained.

"We are the integrators, trying to pull all the assets together that the industry and the military have to make ADL come to life," Murray emphasized.

In addition to improving training and making it more accessible, proponents estimate the country's ADL initiative has the potential to help the Department of Defense (DoD) reduce some of the $15 billion it spends annually to maintain and operate its military training installations. These facilities now provide approximately 30,000 training classes for the military's 2.5 million personnel each year.

THE US ADL ORGANIZATION

The DoD in coordination with the White House Office of Science and Technology sponsors the ADL initiative, which is managed by the Office of the Secretary of Defense (OSD). The program began in 1999 and is part of an overall nationwide effort to provide education and training through advanced technology to all federal agencies, with industry and academia partnering to help develop the required technologies and products. The National Guard Bureau and the Department of Labor are also co-sponsors of the ADL initiative.

The ADL initiative has spawned a network of three Co-Labs, which includes the Orlando facility. The purpose of the network is to serve as the focal point and catalyst for large-scale cooperative research, development, implementation and assessment of ADL technologies and related products.

While the Joint Co-Lab in Orlando was established to promote collaborative development of DoD ADL prototypes and systems acquisitions, the Alexandria Co-Lab serves as the network headquarters. This facility also is the primary developer of ADL policies, as well as standards and specifications that include the Shareable Courseware Object Reference Model (SCORM). The Academic Co-Lab in Madison, Wisconsin is the network's academic partner and works to test, evaluate and demonstrate ADL-compliant tools and technologies to enhance teaching and learning. The ADL effort is expected to foster enhanced learning methodologies and improve the educational process throughout the US educational system.

A STRONG MILITARY INFLUENCE

The Orlando facility's organizational structure is designed to foster and maintain close relationships with the four services through the military simulation and training commands in Orlando and the large local simulation industry community.

The facility's sponsors include the Army's Simulation, Training and Instrumentation Command (STRICOM), the NAVAIR Orlando Training Systems Division (new name – just changed from NAWCTSD in July), the Air Force Agency for Modeling and Simulation (AFAMS) and the Marine Corps Systems Command Program Manager for Training Systems (PMTRASYS). Orlando Co-Lab military partners include the Army Research Institute, The Air Force Institute for Advanced Distributed Learning, the Naval Education and Training Center (NETC) and several others. The facility's academic partner is the University of Central Florida, while the more than 150 M&S companies in the Orlando area lend their expertise as well.

In addition, a recent realignment of the Co-Lab's organization has established a five-member Board of Directors, with four of the positions filled by the commanders of STRICOM, NAVAIR Orlando, AFAMS and PMTRASYS, and the other filled by the Office of the Secretary of Defense. The senior military member of the Board of Directors, STRICOM Commander Brigadier General Stephen Seay, is the Chairman and President of the Board of Directors. Other representatives of these commands serve as Board members. These commands plus the Joint Forces Command provide a link to the services by assigning Associate Directors who represent the interests of their service.

SERVICES INPUT THEIR ADL NEEDS

Lt. Col. Scott Lambert is one of the Co-Lab's Associate Directors and STRICOM Product Manager for Digitized Training. He finds that the relationship between the services and the Co-Lab has proven to be beneficial to all parties involved, especially when a service partner has a particular need to fulfill or problem to solve.

"My role as an associate director for the Joint Co-Lab is to represent the Army's interests in ensuring that the prototypes and the other work that is done in the Co-Lab in some way, shape or form meets the Army's needs", Lambert said. "The Army Training and Doctrine Command (TRADOC) has just recently approved the Army Digital Training Strategy, and that has gone to the Army Chief of Staff for approval. I am excited to be a part of the Joint ADL Co-Lab. The Army DTS presents us with a number of challenges that ADL can help us solve. This makes it a very complementary relationship."

One of the major contributions the Joint Co-Lab provides to assist the military in its ADL efforts is to solicit prototypes, Murray said. This is representative of the facility's consultant and assistance role where the Co-Lab is available to help the services to test products and procedures, she explained. For example, the Co-Lab has recently solicited the services for recommendations on ADL prototype projects designed to meet specific identified ADL challenges and problems. One prototype that was just recently suggested through Lambert's office stems from the acquisition support STRICOM is providing to the Army's Ft. Gordon facility in implementing the TRADOC ADL Life-Long Learning Strategy program.

"As we progress with the Life-Long Learning strategy, the Army Training Support Center that is a part of TRADOC will assume the role of repository for courseware," Lambert said. "And one of the challenges and keys to the success of ADL is the reuse of existing courseware. The Army is proposing prototypes for the Co-Lab from a service-specific perspective that will directly enable us to accomplish that reuse mission for the courseware. Our goal is to see really high-payoff prototypes that move us down the road towards better SCORM standards and higher reuse and lower cost."

A major factor that provides a successful working relationship between the services and the Joint Co-Lab is the synergy that exists in the Orlando simulation and training community, said Commander John Colville. He is the NAVAIR Orlando Training Division's Project Manager for Distance Learning and the facility's Associate Director to the Joint Co-Lab.

"We have all the services and the Joint Co-Lab in this area and we interact back and forth to help determine which tools will help us decide what type of training to deliver," Colville said. "We are involved with the Co-Lab at several different levels, with several members of our staff also working for the Joint Co-Lab. This relationship provides a lot of sharing of lessons learned and what we both are working on. This is a part of the synergy in this area."

The Summer University Faculty program at the Joint Co-Lab is proving to be of particular use, according to Karen McBee, NAVAIR Orlando Training Division Instructional Systems Branch Head. "Where the Joint Co-Lab comes in for me is that we are looking for them to provide us with the opportunity to do research in instructional design areas, and motivation is one of them," McBee said. "Through the University Summer program, we can leverage instructional design experience for Web-based courses from universities and bring this great learning community into training the warfighter."

FEEDBACK IMPROVES STANDARDS

The Orlando Co-Lab organizational structure also provides a mechanism for the services to provide lessons-learned feedback to the Co-Lab network as input to help further the development of ADL standards and specifications. Lambert noted the Army is actively pursuing the use of SCORM, and the Army Training Information Architecture (ATIA) already calls for the use of SCORM standards in courseware development. He went on to say:

"As the Army ADL representative, I can provide feedback such as lessons learned in the efforts to implement SCORM standards to the Co-Lab network to say here is what we can do better with SCORM. The Army's experience with SCORM gives us the ability to address what needs to be improved to lower the cost of developing a SCORM-compliant software and courseware. We can also point out areas we truly need to investigate, such as what is our strategy for indexing search and retrieval at repositories that will foster better reuse of courseware."

REUSE KEY TO ADL SUCCESS

Having an effective means of retrieval for ADL courseware from repositories where it would be stored is a critical factor in the reuse of learning content over a network. The reuse of this information is the key to the lower training costs promised by the ADL technology. Under the centralized clearinghouse concept being developed by the Co-Lab network, each military service would have a repository that would be linked into this clearinghouse, Murray said. In this way, if one service developed an ADL course for military police training, for example, all the services would be able to use and share this product.

"There has to be a repository to store ADL content, along with ways to tag the courseware data so it can easily be found and downloaded for reuse," Murray said." This is one of the really big technology issues that we are working on right now. This is what reuse is really all about."

SCORM 1.3 AT I/ITSEC 2002

The development, testing and implementation of SCORM standards and specifications is another major factor in the success of ADL courseware for military training, as well as a primary focus for the Co-Lab network. The latest version of SCORM, 1.3, is currently scheduled for release at I/ITSEC 2002 in December. This version was tested in July at Plugfest 6. SCORM 1.3 is the first attempt to allow for sequencing of instruction rather than the linear approach that earlier versions of SCORM contained and still have reuse and interoperability, Murray said. This propels SCORM towards becoming a viable standard for training and education, she explained.

"In addition to outreach to the military to help them solve ADL problems, we are also about advancing the SCORM standards so that learning content reuse and interoperability can come to fruition," Murray said. We really want to be able to do this, since it will save a lot of money for the military."

SIMULATION THE NEXT STEP

Once methods have been found to store and tag learning content and make SCORM truly interoperable and reusable, the next step for ADL is to incorporate simulation.

"Being here in Orlando gives us the connection to the simulation community to make this happen," Murray said. "If anyone can make this work, the Orlando M&S community can because this is where the expertise resides. We are working to put all of these really great ideas together to enhance training for the military." MST